

**ABSTRACT OF THE DISCLOSURE**

An optical source generator for wavelength-division-multiplexing optical communication systems includes a wavelength-division multiplexer/demultiplexer, optical amplifiers, and wavelength-dependent reflectors such as optical fiber-Bragg gratings or wavelength-independent reflectors such as mirrors, so as to form laser resonant cavities. Lasing of the optical fibers therefore generates spontaneously emitted lights. Further, the optical source generator controls each reflectance of the respective wavelength-dependent or independent reflectors so that lights amplified within the laser resonant cavities can be used as multi-wavelength optical sources or independent optical sources.